BIG Red Flexitank™

Installation & Usage Procedures

Series 7 - Standard

Environmental
Packaging
Technologies
1-877-8-BIG RED

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BIG Red Flexitank™ USER'S MANUAL

I. INTRODUCTION

The following pages will explain how to properly use and return the BIG Red Flexitank™.

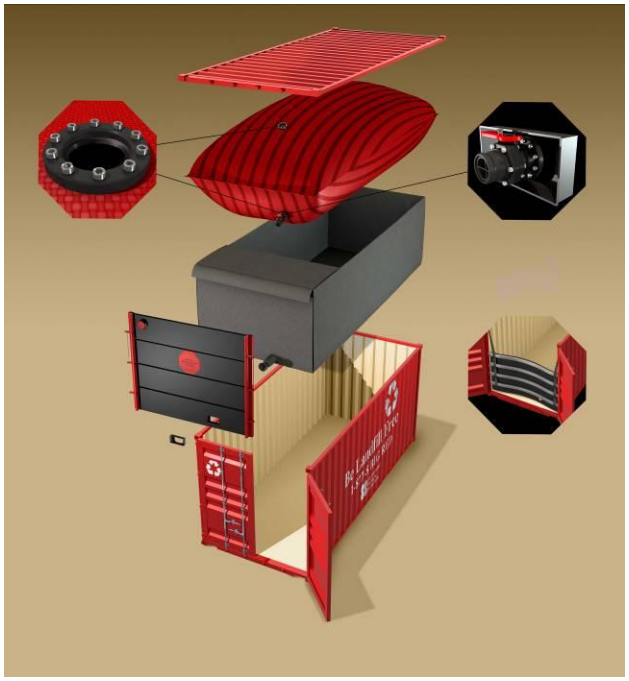
a. Materials of Construction

BIG Red Flexitanks™ are individually sewn and built with 2 layers of 14 mil (356 Microns) low-density U.S.-made food grade PE liner tubes. These tubes are placed one inside of the other with a third extremely rugged external abrasion-resistant safety sleeve. The three tubes are completely independent of each other except where the composite flanges are bolted through all three layers.

BIG Red Flexitanks™ feature composite product coupling valves and vent fittings that are pressure formed to the flexitank in order to prevent leakage.

b. Uses and Limitations

BIG Red Flexitanks™ are used in the agricultural, chemical, cosmetics, pharmaceuticals, food & beverage, and petroleum industries and are compatible with non-hazardous materials. BIG Red Flexitanks™ come in multiple sizes. The capacity is denoted on the shipping box and the manufacturing label attached to the flexitank near the end with the product valve. The capacity is listed in cubic meters (CBM). One cubic meter equals 1,000 liters (i.e. 20 CBM = 20,000 liters).



II. PARTS LIST

a. Product Box
   i. Flexitank
   ii. Product Valve
   iii. Valve Support
   iv. Black 2" Cap for vertical support rod
   v. Vent Line (if required)
   vi. 3" Flange Plug (if required)
   vii. Support Ties
   viii. Installation Paperwork and Warning Labels
   ix. Air Bags
b. Bulkhead
c. Bulkhead Support Beams
   i. 5 - 94.5" horizontal support rods
   ii. 1 - 62" vertical support rod
d. Wear Sleeve

Flexitank in Box

Small Parts Kit:
Zip Ties,
Paperwork,
Vent Line, Etc.

Bulkhead

Environmental Packaging Technologies
6100 West by Northwest; Suite 100, Houston, Texas 77040 (713) 961-2795 Fax (713) 961-0189

EPT Container Selection Criteria

- Containers selected for flexitank transport must have a gross weight rating of at least 30,480 Kgs.
- Containers must be no more than 10 years old.
- Both side walls should be corrugated for the entire length of the side wall. Any container with flat decal panels must be rejected.
- There should not be any deformation to any of the container walls.
- Each door must have a minimum of two locking bars and each locking bar must be retained by a minimum of three locking bar brackets.
- All locking bar cams should lock into both top and bottom locking bar cam retainers correctly.
- Handles should position freely into door handle retainers and door handle catches should close fully.
- Structural parts of the door; vertical sections, upper and lower 'C' sections should be free from buckling and dents. All hinges should be in working order and free moving.
- The floor must be free from splinters and protruding nails, screws and other fixings
- **Any container with any of the following features should be rejected:**
  - Gouge greater than ½" (15mm) deep irrespective of length
  - Gouge more than ¼" (6mm) deep and greater than 6" (150mm) wide irrespective of length
  - Repaired sections larger than 2' (610mm) x 2' (610mm)
  - De-lamination of the floor boards or any other damage affecting floor strength
  - Difference in height between adjacent planks / panels greater than ½" (15mm)
  - Holes in the floor or walls other than nail holes
  - Excessive rust

III. INSTALLATION

a. Container Preparation

It is very important to prepare the container properly and thoroughly. If the walls or floor of the container are in bad condition, do not use.

STEP 1 Open container and sweep out all dust and dirt.

STEP 2 Use duct tape to cover the corner welds of the container. There are typically 2 welds on each side of the container and 2 more on the front wall. Put duct tape from the floor of the container to approximately ¾ the height of the container wall. This is to prevent the rough welds from chafing the flexitank.

STEP 3 Using your hand, feel the walls of the container for rough spots. Cover any rough spots with duct tape. Use corrugation to cover any rough wall areas.

STEP 4 Inspect the container floor for nails, screws, or anything else that might puncture the flexitank. Remove any sharp objects on the floor. Use duct tape or corrugation to cover any rough spots on the floor of the container.

NOTE: **The flexitank box may be used to cover large portions of the floor if required.**

STEP 5 Complete ETP Form QF-75-03-3 "Container Checklist" and set aside. This form will be placed in the paperwork sleeve on the outside of the bulkhead. If the container does not pass all categories of the checklist, reject the container and use another one.

b. Wear Sleeve Installation

STEP 1 Remove the wear sleeve from its protective bag.

STEP 2 Unroll into the container. Make sure the product valve snout is facing the doors.

STEP 3 Unfold the unit to the sides of the container.

STEP 4 Hang the wear sleeve from the lashing loops in the top of the container (as shown below).

STEP 5 Fold the front of the wear sleeve into the container in order to install the bulkhead (as shown below).

c. Flexitank Installation

STEP 1 Open the flexitank box. Set the small parts bag aside.

STEP 2 Remove the flexitank from the box. Discard the box.

STEP 3 Place the flexitank on the floor of the container near the doors. Unroll the flexitank toward the front of the container (away from the doors). **Make sure that the product valve is at the rear of the container.**

STEP 4 Unfold the flexitank to the right. Align the flexitank with the right side of the container. This will put the valve in the correct position. Now unfold the flexitank to the left side of the container.

STEP 5 Use your foot to push the flexitank tightly against the sides of the container at the floor. Do the same in the front corners. **The flexitank should be centered in the container.**

STEP 6 Using the support ties attached to the flexitank; tie the front of the flexitank to the lashing bars in the front corners of the container.

STEP 7 If equipped with a vent flange, remove the red shipping cap in the flange and install the vent line with the cap toward the doors.

STEP 8 Fold the flexitank into the container past the wear sleeve to provide space for the installation of the bulkhead.

d. Bulkhead Installation

STEP 1 Place the bulkhead between the doors of the container.

STEP 2 Insert the top beam into the lashing channels of the container and secure with the Velcro loops. **Make sure that the product valve hole is on the right side.**

STEP 3 Install the remaining 4 horizontal bulkhead support beams. Install the rods sequentially starting with the top support rod.

STEP 4 Install the vertical bulkhead support rod. Place it on the outside of the horizontal support rods slightly offset to the left of center. Using the zip-ties from the small parts bag, secure the vertical support rod to each horizontal support rod. Use 2 zip-ties per horizontal support rod in a criss-cross manner.

STEP 5 Place the square plastic cap (from the small parts bag) in the top of the vertical bar.

STEP 6 From inside of the container; lay the surge protection wing over the bulkhead in order to access the back.

e. Final Installation Steps

STEP 1 Finish installing the wear sleeve by tying the front corners to the front lashing bars.

STEP 2 Push the product valve snout through the valve hole in bulkhead.

NOTE: **Small slits will need to be cut in the wear sleeve to allow the nylon bolts to attach to the bulkhead.**

STEP 3 Unfold the flexitank toward the bulkhead. **Make sure that the product valve is properly located. If not, move the flexitank until the valve is properly aligned with the hole in the bulkhead.**

STEP 4 Push the valve support plate tightly against the bulkhead with the bottom of the valve support plate in the front corner of the bulkhead. Feed the valve through the wear sleeve snout and the hole in the bulkhead.

NOTE: **Make sure the flexitank is not underneath the valve support plate.**

STEP 5 Insert the nylon bolts into the holes on the valve support plate and push through the bulkhead. The plastic washers are to be used on both sides of the bolt assembly. Tighten from the outside using the wing nuts.

STEP 6 Use your foot to make sure the flexitank is up against the bulkhead. Tie the support straps attached to the rear corners of the flexitank to the lashing bars in the container.

STEP 7 If using the vent line, it needs to be fed through the loop on the sewn end of the right surge protection wing strap.

STEP 8 Tie the left side of the surge protection wing to the container. Feed the right strap through the lashing loop on the container and back to the bulkhead. Climb over the bulkhead.

STEP 9 Inflate the 3 airbags included in the flexitank box.

NOTE: **If the air bags do not inflate, check the box and the flexitank for punctures.**

STEP 10 Place the 2 longer airbags on top of the flexitank, parallel to the stripes on the flexitank.

STEP 11 Tighten the right strap of the surge protection wing, and tie it to the top bar of the bulkhead or a lashing bar.

STEP 12 Complete EPT Form QF-75-04 "Installation and Load Report" and place it in the document pouch on the bulkhead. **Be sure to fill in the Flexitank Capacity box.** The capacity is listed on the shipping box as well as the manufacturing tag attached to the flexitank on the end with the product valve.

COMPLETED BULKHEAD

STEP 13 Close the **LEFT** container door. **Make sure that vertical bulkhead support beam is covered by the door.**

STEP 14 Place the shorter airbag between the doors and the surge prevention wing.

STEP 15 Place the warning sticker on the outside of the left door. It may be necessary to clean a portion of the door to attach the sticker.

STEP 16 Close the product valve and roll the wear sleeve snout closed.

STEP 17 Close the right door.

The flexitank is now completely installed and ready for loading.

IV. PRODUCT LOADING

a. Loading Procedure

STEP 1 Inspect the flexitank for proper installation. Be sure to check the following items:

- Make sure that the flexitank has been properly unrolled completely against the walls of the container and into the corners. The flexitank should be secured to the container in all corners.
- Make sure that the product surge prevention wing has been secured.
- Check the product valve. It should be securely against the bulkhead with the valve standing straight out.
- **Verify the capacity of the flexitank to avoid under or over-filling. Flexitanks can be under loaded by up to 5% of the total capacity of the flexitank. DO NOT OVERFILL.**

STEP 2 Open the wear sleeve snout and roll back to expose the valve.

STEP 3 Remove the safety cap in the end of the valve. Pull the lever of the product valve outward to ensure that the ball valve is fully opened.

STEP 4 Fit the cam-lock coupling of the loading hose properly to the valve. Lock into place. **Make sure that the product hose is properly supported to prevent pulling downward on the product valve and potentially damaging the flexitank.**

NOTE: FOR TOP-LOAD FLEXITANKS – During the flexitank installation, the fitters should have fit a stringer line to the product valve and opened it completely. This stringer line should be secured to one of the top supports near the right door. Connect the product line to this stringer line.

NOTE: When filling the flexitank, DO NOT exceed full capacity. Check EPT Form QF-75-04 "Installation and Load Report" in the document pouch on the bulkhead.

STEP 5 When the required amount of product has been loaded into the flexitank, close the product valve on the flexitank by moving the lever to the closed position and turn off the pump.

STEP 6 Remove the loading hose attached to the product valve.

NOTE: FOR TOP-LOAD FLEXITANKS – Disconnect the product fill line from the pump before disconnecting from the flexitank. This will discharge the excess product in the line to a collection point at the pump and keep product from spilling onto the top of the flexitank.

STEP 7 Clean the valve and replace the safety plug in the end. **Tighten the safety plug completely with a bung wrench.**

STEP 8 Twist the snout of the wear sleeve closed and tighten with the zip-tie attached. Fold out of the way of the door.

STEP 9 Close the vent line cap, if included.

STEP 10 Close the right hand door of the container.

The loading process is complete.

V. PRODUCT DISCHARGING

The front of the container must be inclined to completely discharge the flexitank.

a. Discharge Procedure

STEP 1 Place the suction pump at a convenient spot between the container and the storage tank.

STEP 2 Open the right hand door of the container only. **The left hand door must be closed at all time during the discharging process.**

STEP 3 Open the snout of the wear sleeve and remove the safety plug on the product valve.

STEP 4 Connect the cam-lock coupling of the inlet hose of the pump to the product valve on the flexitank and connect the outlet hose to the storage tank, making sure that these two couplings are properly connected. Depending on hose size, a reducer may be required as shown below.

STEP 5 Move the handle of the product valve to the open position and turn on the pump to start the discharging process. **Make sure that the product hose is properly supported to prevent pulling downward on the product valve. One method is shown below.**

STEP 6 When the product has been 75% to 80% discharged, reduce the pump rate. When the liquid in the flexitank is lowered to approximately 4 inches (10 cm) from the floor level, 1 to 2 workers must go inside the container to lift up the sides of the flexitank to move the product into the center. Leave the sides of the flexitank folded over.

STEP 7 Lift the front end of the flexitank and roll slowly towards the door so that the liquid residue can flow easily towards the product valve. Continue the process until the liquid inside the flexitank is totally pumped off.

NOTE: For some products, the flexitank is easier to empty if a large, flat tool (i.e. squeegee or the back side of a push broom) is used on the outside of the flexitank to push product toward the product valve.

STEP 8 Close the product valve and turn of the suction pump. Remove the coupling from the product valve. Replace the safety plug on the product valve.

STEP 9 Open the left container door and dismantle the bulkhead.

STEP 10 Roll up the flexitank and wear sleeve. Place them with the bulkhead and support beams.

STEP 11 Close the container doors.

The discharging process is complete.

VI. RETURNING THE FLEXITANK

a. Packaging Procedure

STEP 1 Make sure vent line is closed (if included.)

STEP 2 Make sure product valve is closed and the safety cap is installed and tight.

STEP 3 With flexitank laying flat on the container floor, fold the sides inward toward the center of the flexitank.

STEP 4 Fold both sides once again to meet in center of flexitank.

STEP 5 Starting at the end opposite the valve, make an 18 inch fold in the tank, folding end over end until other end of tank is reached. This will allow flexitank to fit inside the provided Reclaim Bag.

STEP 6 Place the flexitank, valve support, and wear sleeve in the Reclaim Bag.

STEP 7 Zip up Reclaim Bag and move to appropriate storage to await retrieval by EPT Reclaim Team.

STEP 8 Place the bulkhead and the bulkhead support rods with the flexitank. These will also be retrieved by the EPT Reclaim Team.